

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* FRED C. REDEKER,  
JOHN BOYD, YEZDI DORDI,  
WILLIAM THIE and  
BOB MARASCHIN

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Appeal 2007-3830  
Application 10/734,704  
Technology Center 1700

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Decided: December 5, 2007

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Before BRADLEY R. GARRIS, THOMAS A. WALTZ, and  
CATHERINE Q. TIMM, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-9 and 21-27. We have jurisdiction under 35 U.S.C. § 6.

We REVERSE.

Appellants claim an apparatus for depositing a planarizing layer over a wafer which comprises a tank, a wafer support structure within the tank, a planar member disposed above and substantially parallel to the wafer support structure wherein the planar member is capable of being positioned proximate to the wafer to be supported by the wafer support structure such that the planar member serves as an upper confinement boundary for material deposited on the wafer through electroless plating reactions, and a radiant energy source disposed above the planar member to direct radiant energy through the planar member and to the wafer.

Representative claim 1 reads as follows:

1. An apparatus for depositing a planarizing layer over a wafer, comprising:

a tank defined by a bottom and an enclosing wall, the tank being configured to contain an electroless plating solution;

a wafer support structure disposed within the tank, the wafer support structure being configured to support a wafer at a submerged position within the electroless plating solution to be contained within the tank;

a planar member disposed above and substantially parallel to the wafer support structure, the planar member capable of being positioned proximate to the wafer to be supported by the wafer support structure such that the planar member serves as an upper confinement boundary for material deposited on the wafer through electroless plating reactions; and

a radiant energy source disposed above the planar member and above the wafer support structure, the radiant energy source being oriented to

direct radiant energy through the planar member and to the wafer to be supported by the wafer support structure.

The references set forth below are relied upon by the Examiner as evidence of unpatentability:

Sandaiji	4,982,065	Jan. 1, 1991
Mayer	5,096,550	Mar. 17, 1992
Barringer	6,496,001 B1	Dec. 17, 2002
Bjornson	6,900,889 B2	May 31, 2005
Ballantine	6,699,400 B1	Mar. 2, 2004
Zuniga	US 2004/0192173 A1	Sep. 30, 2004
Montierth	US 2005/0003737 A1	Jan. 6, 2005

Claims 1-8 and 22-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Montierth.

Under 35 U.S.C. § 103(a): claim 9 is rejected over Montierth in view of Mayer; claims 21 and 25 are rejected over Montierth alone; claim 26 is rejected over Montierth in view of Barringer; and claim 27 is rejected over Montierth in view of Zuniga.

Claims 1-7, 22, and 24 are rejected under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being unpatentable over, Sandaiji.

Under 35 U.S.C. § 103(a): claims 8 and 9 are rejected over Sandaiji in view of Ballantine; claim 21 is rejected over Sandaiji alone; and claim 23 is rejected over Sandaiji in view of Bjornson.

For the reasons which follow, we cannot sustain any of the above-noted rejections.

The rejections based on Montierth

All of these rejections are premised on the Examiner's finding that vibration member 3802b of the Figure 38 apparatus satisfies the claim requirement "a planar member disposed above and substantially parallel to the wafer support structure, the planar member capable of being positioned proximate to the wafer to be supported by the wafer support structure such that the planar member serves as an upper confinement boundary for material deposited on the wafer through electroless plating reactions" (Claim 1)(Ans. 4, et seq.). As correctly argued by Appellants, however, Montierth contains no teaching that vibration member 3802b is capable of being positioned proximate to the wafer such that the member serves as an upper confinement boundary for material deposited on the wafer as required by each of the independent claims on appeal (App. Br. 7-8; Reply Br. 9-10).

According to the Examiner, "[t]his argument is not deemed persuasive because Montierth illustrates in various embodiments, the work support being of varying thickness (see Fig. 1a versus Fig. 38) so as to position the wafer closer or further away from the planar member and for that matter the energy source too" (Ans. 10). The Examiner's position is not well taken. Nothing in Montierth including the Figure 1a disclosure thereof teaches varying the thickness of the work support in Figure 38 to such an extent that the wafer on the work support would be positioned proximate to upper

vibration member 3802b whereby this member would then serve as an upper confinement boundary for material deposited on the wafer. Moreover, the Examiner's position appears to be an attempt to combine unrelated teachings of the disparate embodiments shown in Figs. 1a and 38. Such an attempt has no place in a § 102 rejection. *See In re Arkley*, 455 F.2d 586, 587-88 (CCPA 1972).

For these reasons, we cannot sustain the § 102 rejection based on Montierth. Furthermore, since the above discussed deficiencies of Montierth are not corrected in the Examiner's obviousness positions, we also cannot sustain any of the § 103 rejections based on Montierth.

The rejections based on Sandaiji

The Sandaiji apparatus is for producing a magnetic head core via laser-induced etching (Abstract). Nevertheless, the Examiner considers the Sandaiji apparatus to be inherently capable of performing the planarizing layer deposition function of Appellants' claimed apparatus and concomitantly considers quartz window 7 of Sandaiji's apparatus to be a planar member capable of being positioned proximate to a wafer such that the window would serve as an upper confinement boundary for material deposited on a wafer through electroless plating reactions as required by the appealed claims (Ans. 4-5). We cannot agree.

We understand that the level of Sandiji's quartz window 7 is adjustable by means of "micormeter" 6 (col. 8, ll. 11-15). However, it is mere conjecture on the Examiner's part to assume that "micormeter" 6 would

be capable of lowering quartz window 7 to such an extent that, if the Sandaiji apparatus were used for depositing a planarizing layer over a wafer, the window would be positioned proximate to the wafer such that the window would serve as an upper confinement boundary for material deposited on the wafer in accordance with the appealed claims. Such conjecture is inappropriate in either a § 102 or § 103 rejection. *See W.L. Gore Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 1554 (Fed. Cir. 1983), *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967), and *In re Turlay*, 304 F.2d 893, 899 (CCPA 1962).

Under these circumstances, we cannot sustain the Examiner's § 102/§103 rejection of claims 1-7, 22, and 24 based on Sandaiji. The other § 103 rejections based on Sandaiji also cannot be sustained because they do not cure the conjectural infirmity discussed above.

#### Conclusion

The decision of the Examiner is reversed.

REVERSED

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